



Environmental health indicators of climate change for the United States: findings from the State Environmental Health Indicator Collaborative

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Abstract:

OBJECTIVE: To develop public health adaptation strategies and to project the impacts of climate change on human health, indicators of vulnerability and preparedness along with accurate surveillance data on climate-sensitive health outcomes are needed. We researched and developed environmental health indicators for inputs into human health vulnerability assessments for climate change and to propose public health preventative actions. **DATA SOURCES:** We conducted a review of the scientific literature to identify outcomes and actions that were related to climate change. Data sources included governmental and nongovernmental agencies and the published literature. **DATA EXTRACTION:** Sources were identified and assessed for completeness, usability, and accuracy. Priority was then given to identifying longitudinal data sets that were applicable at the state and community level. **DATA SYNTHESIS:** We present a list of surveillance indicators for practitioners and policy makers that include climate-sensitive health outcomes and environmental and vulnerability indicators, as well as mitigation, adaptation, and policy indicators of climate change. **CONCLUSIONS:** A review of environmental health indicators for climate change shows that data exist for many of these measures, but more evaluation of their sensitivity and usefulness is needed. Further attention is necessary to increase data quality and availability and to develop new surveillance databases, especially for climate-sensitive morbidity.

Source: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2801164>

Resource Description

Communication: ☒

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☒

audience to whom the resource is directed

Health Professional, Policymaker, Public

Early Warning System: ☒

resource focus on systems used to warn populations of high temperatures, extreme weather, or other

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elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Extreme Weather Event, Food/Water Quality, Food/Water Quality, Food/Water Security, Meteorological Factors, Precipitation, Sea Level Rise, Temperature, Unspecified Exposure

Air Pollution: Allergens, Ozone, Particulate Matter

Extreme Weather Event: Drought, Flooding, Hurricanes/Cyclones, Landslides, Wildfires

Food/Water Quality: Biotoxin/Algal Bloom, Pathogen

Temperature: Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Ocean/Coastal, Urban

Geographic Location:

resource focuses on specific location

United States

Health Impact:

specification of health effect or disease related to climate change exposure

Cancer, Infectious Disease, Injury, Morbidity/Mortality, Respiratory Effect

Infectious Disease: Foodborne/Waterborne Disease, Vectorborne Disease, Zoonotic Disease

Foodborne/Waterborne Disease: General Foodborne/Waterborne Disease

Vectorborne Disease: Mosquito-borne Disease, Tick-borne Disease

Mosquito-borne Disease: Dengue, West Nile Virus

Tick-borne Disease: Lyme Disease

Zoonotic Disease: Hantavirus Pulmonary Syndrome

Respiratory Effect: Asthma, Chronic Obstructive Pulmonary Disease, Upper Respiratory Allergy

Medical Community Engagement:

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

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Adaptation, Mitigation

Population of Concern: A focus of content

Population of Concern: ☒

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Low Socioeconomic Status, Pregnant Women

Other Vulnerable Population: Pre-existing medical conditions; Disabled; Socially Isolated; Immunocompromised

Resource Type: ☒

format or standard characteristic of resource

Policy/Opinion, Review

Timescale: ☒

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☒

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content